

# Absent right superior vena cava

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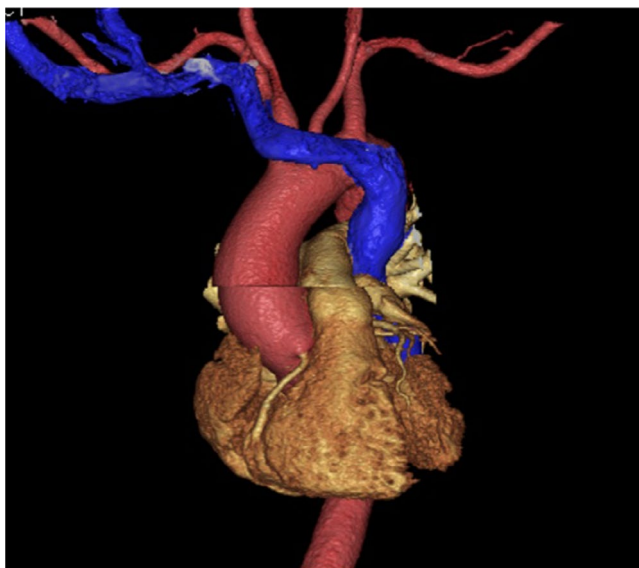
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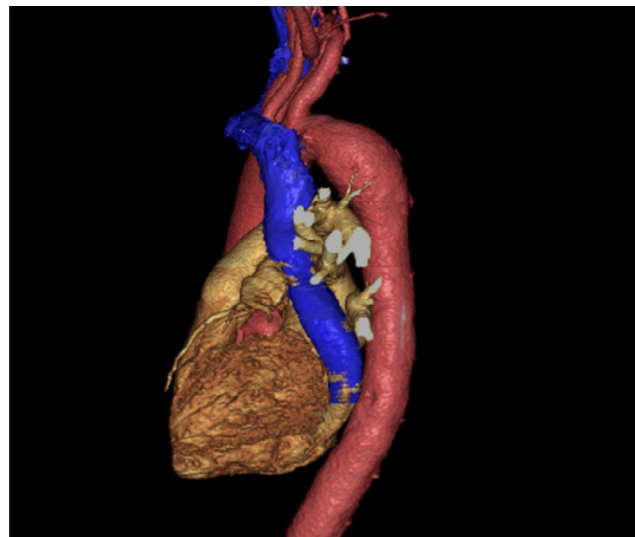
A 58-year-old man was scheduled to undergo catheter ablation for paroxysmal supraventricular tachycardia. However, an anatomical abnormality of the superior vena cava was suspected when the electrode catheter was inserted from the right jugular vein. Simultaneous angiography of the right subclavian vein and right atrium showed the absence of the superior vena cava on the right side (Video S1). Three-dimensional contrast-enhanced chest computed tomography revealed that a persistent left superior vena cava (Figure 1, blue vessel) led to a

dilated coronary sinus (Figure 2, blue vessel). The absence of the superior vena cava on the right side and its persistence on the left confirmed the diagnosis of an isolated persistent left superior vena cava.

Isolated persistent left superior vena cava occurs in only 0.09%–0.13% of the patients with congenital heart disease.<sup>1</sup> We should keep such an anatomical abnormality in mind, especially when a central or a peripherally inserted central venous catheter is inserted into the right jugular vein or the right subclavian vein.



**FIGURE 1** A three-dimensional CT image (anterior view): A persistent left superior vena cava without a superior vena cava on the right. CT, computed tomography [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]



**FIGURE 2** A three-dimensional CT image (lateral view): A persistent left superior vena cava leading to the right atrium via a dilated coronary sinus. CT, computed tomography [Colour figure can be viewed at [wileyonlinelibrary.com](https://onlinelibrary.wiley.com)]

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**CONFLICT OF INTEREST**

The other authors have stated explicitly that there are no conflicts of interest in connection with this article.

**INFORMED CONSENT**

We have obtained the consent of the patient for publication.

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**REFERENCE**

1. Bisoyi S, Jagannathan U, Dash AK, Tripathy S, Mohapatra R, Pattnaik N, et al. Isolated persistent left superior vena cava: a case report and its clinical implications. *Ann Card Anaesth*. 2017;20(1):104-7.

**SUPPORTING INFORMATION**

Additional supporting information may be found online in the Supporting Information section.